

Table 4.8.2 Mean formant values (in Hz) of each nasal vowel across all dialects

Dialects	ĩ		ẽ		ɛ̃		ǣ		ā		ũ		õ		õ̃	
	F1	F2 ¹	F1	F2 ¹	F1	F2 ¹	F1	F2 ¹	F1	F2 ¹	F1	F2 ¹	F1	F2 ¹	F1	F2 ¹
Aṇɔ	351	1941	550	1209	529	1430	575	978	735	633	333	718	489	538	576	408
Avenor	357	1890	584	1070	590	1337	594	905	783	573	370	628	422	543	619	421
Ho	354	2076	475	1800	624	1440	562	1547	744	653	344	790	542	558	581	476
Kpando	320	2032	463	1620	627	1385	574	1302	730	638	340	644	540	572	598	445
Tɔɲu	374	1785	532	1559	619	1502	581	1584	760	683	369	781	495	769	623	448

4.9 Vowel Space across Dialects

This section compares vowel space across the dialects. The plots are F1/F2¹ vowel space plots of the mean formant values of the oral and nasalized vowels of the various dialects.

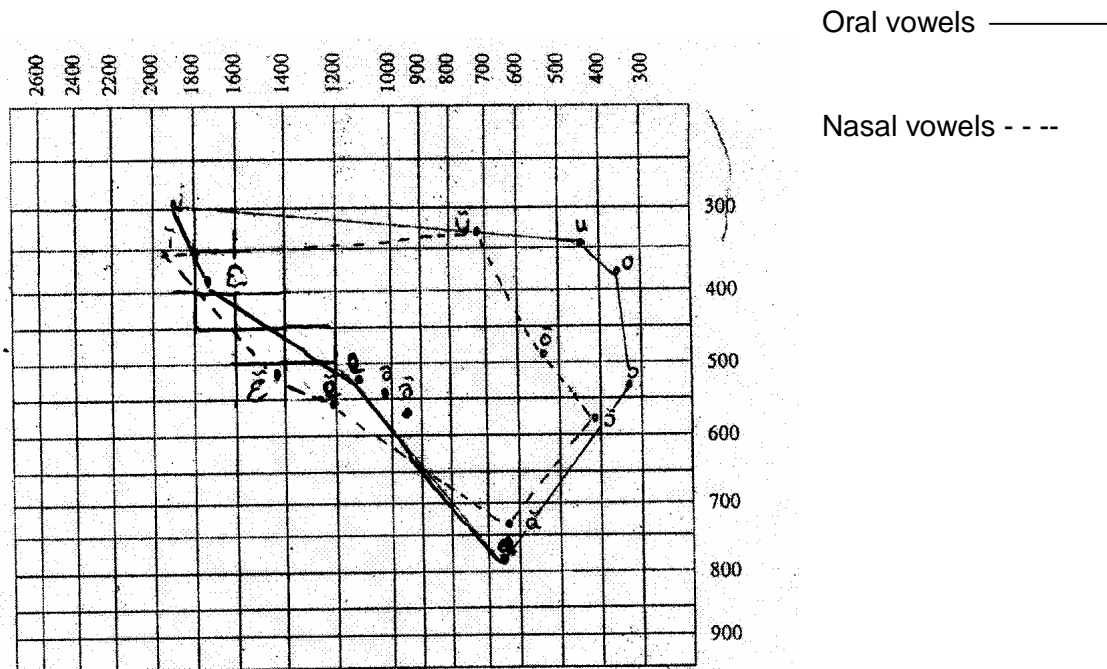


Figure 4.9.1. F1/F2¹ Vowel Space plots for the mean formant values of Oral and Nasalized Vowels by Aṇɔ speakers.

Figure 4.9.1 is the plot of oral and nasalized vowels of speakers of Aṇɔ dialect. The nasal vowels were realized with a higher F2¹, shifting the nasalized vowel space to the front and the oral to the back of the space. That is, the front nasalized vowels of Aṇɔ are shifted more to the front as compared to their oral

ones while the back oral vowels are rather more peripheral than the nasals. The oral vowels of this dialect appear to occupy a larger acoustic space as compared to the nasals.

Just like the Anjo speakers, the nasalized vowel space of the Avenors is also moved more forward than the orals (Figure 4.9.2).

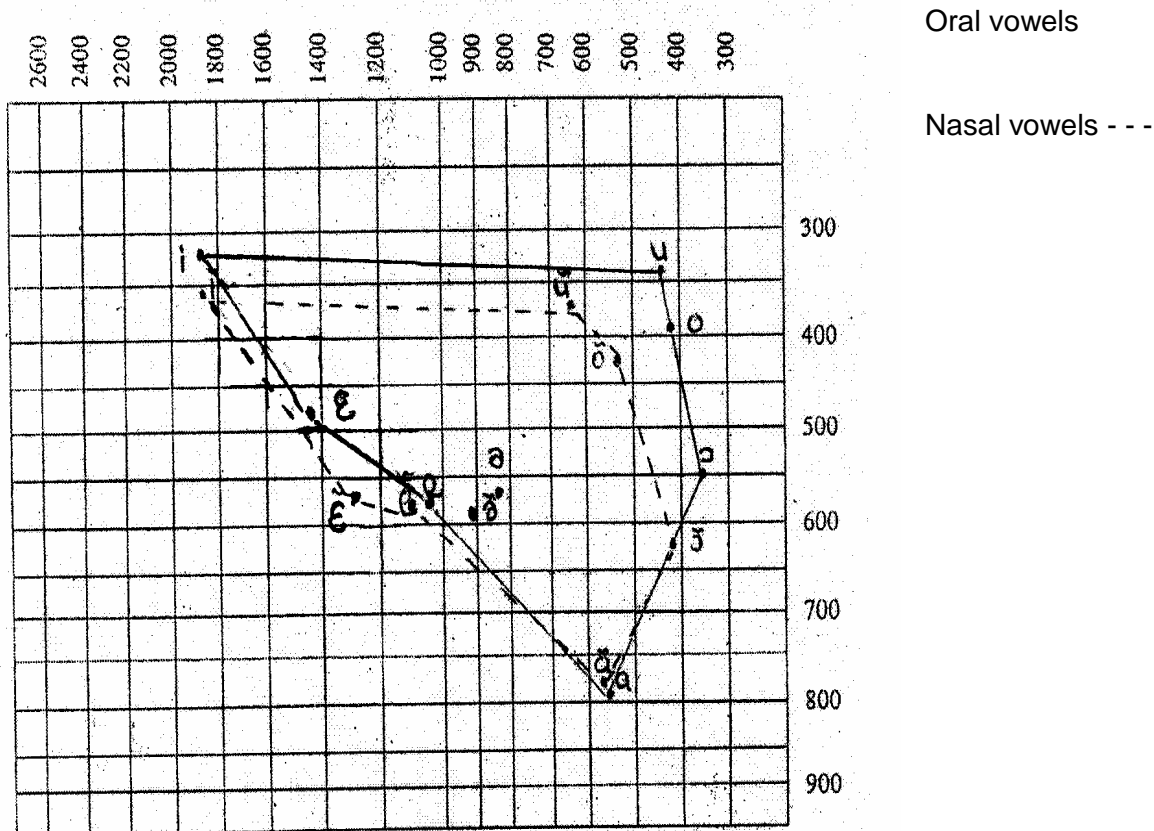
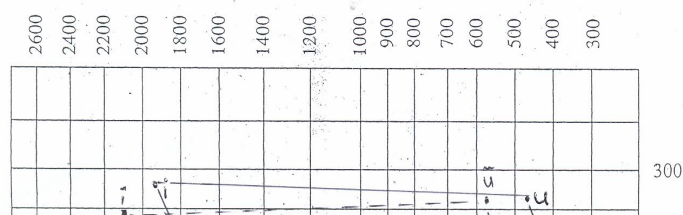


Figure 4.9.2. F1/F2¹ Vowel Space plots for the mean formant values of Oral and Nasalized Vowels by Avenor speakers.

That is the front nasal vowels are more front and the back oral vowels are more back than their nasal counterparts. In this case the observation is that Anjo and Avenor are almost the same so far as their vowel spaces are concerned. The acoustic space these two dialects is more retracted from the front with the location of [e] and [ẽ] almost at the center. There is evidence here of [e] and [ẽ] lowering, perhaps due to the very high nature of their “ε”.



Oral vowels _____

Nasal vowels -----

Figure 4.9.3. F1/F2¹ Vowel Space plots for the mean formant values of Oral and Nasalized Vowels by Ho speakers.

Figure 4.9.3 is the combined formant plot of the oral and the nasalized vowels produced by Ho speakers. In comparison, the nasal vowel space is also shifted to the front, making the back-nasalized vowels less back. Vowel space of this dialect looks more like the traditional vowel chart with the front mid vowels just a little retracted to the center as compared to [i]. [e] and [ɛ] are rather higher than their nasal counterparts. These dialect speakers do not quite produced these vowels differently (table 4.3.1).